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First Named Inventor: Leonid Pavlov

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EXAMINER: PIHULIC, DANIEL T.

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To: PIHULIC, DANIEL T.

## Dear Mr. PIHULIC:

The authors are deeply grateful to you for careful research of our application. Many your critical remarks are indisputable and we accept them, some we would like to discuss, and with some are not consent.

It is not the justification, but unfortunately it is the facts, that the English language is not parent for known scientists, and that now they have no a financial opportunity to resort to the help of the patent agents. Now in succession:

- 1. Yes, phrase: "This application claims the benefit of U.S. Provisional Application No. 60/396,995, filed 07/22/2002 " by us is missed and we are subordinated to a rule.
- 2, Yes, opposed by you the IJ.S. Pat. No. 4,922,468 to J.K. Menezes (dated May I, 1990) should be considered as the prototype patent. I have thousand copies of the patents and other printed materials on this theme, but, unfortunately, I have missed this patent. As now we should give the comment on this patent, it will be made further. Here, we ask to pay your attention to such fact, that in later patents and scientific articles written known American and other scientists, are not present the references to this patent, for example, the U.S. Patents No.

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4,955,005; No, 5,177,891; No. 5,282,178; No. 5,883,858 [Primary Examiner: Phulic, Daniel T.].

USING SOUND TO MODIFY FISH BEHAVIOR AT POWER-PRODUCTION AND WATER-CONTROL FACILITIES: A WORKSHOP, December, 1995, Portland, Oregon. World-wide famous scientists, such as the Americans Dr. Richard R. Fay, Dr. Arthur N. Popper, Dr. Thomas J. Carlson, Dr. Sheryl Coombs, Dr. Mardi C. Hastings, Dr. Paul H. Loeffelman, the Norwegians Dr. Frank R. Knudsen, Dr. 0. Sand etc. speak the reports. On sessions of questions and answers there is a brisk exchange of opinions. The report of Mr. John K. Menezes: "Ultrasound/Infrasound FishShartle® Techniques: Hearing, Shad, Pacific Salmonids" has passed unnoticed.

## **Question and Answer Session:**

DR. Mardi C. Hastings. I have a question for Frank Knudsen: "How close were the salmon to the infrasound source before you saw the avoidance response? In your test, you said that once they approached the source, at some point they startle and immediately swim away.

DR. Frank Knudsen. Using this specific sound source with that specific output, you see avoidance responses.

DR. Hastings: 2,5 to 3m? DR. Knudsen: YES.

DR. Hastings: So, statistically we are well within near field? DR. Knudsen: Yes.

8 - 10 April 2002. An international Workshop on the Applications of Passive Acoustics in Fisheries. Massachusetts Institute of Technology. Cambridge, MA.

Fish Bioacoustics: An International Conference, May 30 - June 2, 2001... Sponsored by Loyola University, Chicago. Organizers: Richard R. Fay (Loyola. University), Arthur N. Popper (University Maryland), Jacqueline F. Webb (Villanova University). About meeting. "The field of fish bioacoustics encompasses work of the scientists with interests in basic biology, including structure and function of the auditory and mechanosensoryacoustical and lateral line of system, as well as those with interests in applied areas, such as the use of sound for the assessment of fish populations, the effects of sound on fish behavior, how to avoid impingement of fishes in power plants and irrigation facilities, how to design dams and bypasses, to accommodate normal migratory fish behavior, how to assess the effects of seismic surveys on fish behavior, and physiology etc. How can efforts to address fundamental problems in fish bioacoustics and design appropriate experimental approaches benefit from broad interactions between scientists from the diverse, basic and applied subdisciplines of sensory biology and behavior, acoustic oceanography and bioacoustic engineering.

Richard R. Fay, HEARING IN' VERTEBRATES: A Phsychophysics Databook. Parmly Hearing Institute and Department Of Psychology Loyola University. With 294 original figures, 281 tables [Fish Hearing Thresholds '-Fish Hearing Curves]

Dear Mr. Pihulic, the given materials are deeply analysed by us. We used all the best, that there is in them. The decision of problems of a high level, using a trial and error method is a bad engineering creativity. The exception of the technical and physical antinomies requires their deep understanding in a context of a possible technology and rules of development of engineering systems. These rules can be determined by means of the analysis of all data connected to individual engineering system. We found an approach to the problem.

Dear Mr. Pihulic, I think, that I have shortened the description of our patent without prejudice to it. I am sending you on your consideration such shortened variant. We will be grateful to you for any corrections or remarks improving the text of the patent.

Sincerely yours

Leonid N. Pavlov

Enclosure.